

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

Nicolai Kosche et al.

Title:

METHOD AND APPARATUS FOR DATA OBJECT PROFILING

Application No.: 10/840,167

Filed:

May 5, 2004

Examiner:

Mary J. Steelman

Group Art Unit:

2191

Atty. Docket No.: 004-9158

Confirmation No.:

7505

March 14, 2006

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INFORMATION DISCLOSURE STATEMENT 37 C.F.R. § 1.97(b)

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\boxtimes	Form(s) PTO/SB/08A (3 page(s), with copy of 1 reference(s)).
\boxtimes	Form(s) PTO/SB/08B (2 page(s), with copy of 26 reference(s)).
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For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance through (i) an English language abstract, (ii) an English language equivalent application, or (iii) if cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

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767/85/98A (Substitute for form 1449/PTO)	Attorney Docket No.:	004-9158
400	Application No.:	10/840,167
HAR 17 200 INFORMATION DISCLOSURE STATEMENT BY APPLICANT	First Named Inventor:	Nicolai Kosche
\$	Filing Date:	May 6, 2004
& TRADEMARY	Group Art Unit:	2191
	Examiner Name:	Steelman, Mary J.
Sheet 1 of 5	Date Submitted:	March 14, 2006

			U.S. PATENT DO	CUMENTS			
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, W Relevant Passages or Rele Figures Appear	Relevant	
	AA	5,526,499	06-11-1996	Bernstein et al.			
	AB	5,948,095	09-07-1999	Arora et al.			
	AC	5,964,867	10-12-1999	Anderson et al.			
	AE	6,092,180	07-18-2000	Anderson et al.			
	AF	6,098,166	08-01-2000	Liebholz et al.			
	AG	6,289,506	09-11-2001	Kwong et al.			
	AH	6,308,261	10-23-2001	Morris et al.		-	
	AI	6,314,431	11-06-2001	Gornish			
	AJ	6,567,975	05-20-2003	Damron			
	AK	6,574,713	06-03-2003	Kosche et al.	-		
	AL	6,625,660	09-23-2003	Guthrie et al.			
	AM	6,651,245	11-18-2003	Damron et al.			
	l		FOREIGN PATENT	DOCUMENTS			
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶	
	AN	WO 01/44927 A2	06-21-2001	Kosche et al.			
Examiner Sig	nature			Date Considered			

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³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3)

⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

⁶Applicant is to place a check mark here if English language Translation is attached.

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	AA	6,671,878	12-30-2003	Bliss		
	AB	6,675,374	01-06-2004	Pieper et al.		
	AC	6,675,380	01-06-2004	McKinsey et al.		
	AD	6,678,796	01-13-2004	Kosche et al.		
	AE	6,681,317	01-20-2004	Mathews		-
	AF	6,697,932	02-24-2004	Yoaz et al.		
	AG	6,748,589	06-08-2004	Johnson et al.		
	AH	6,785,796	08-31-2004	Damron et al.	·	
	AI	6,880,073	04-12-2005	Arimilli et al.		
	AJ	6,918,111	07-12-2005	Damron et al.		
			FOREIGN PATENT	DOCUMENTS		
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
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	AA	2002/0010913	01-24-2002	Ronstrom	
	AB	2002/0056078	05-09-2002	Inagaki et al.	
	AC	2003/0074653	04-17-2003	Ju et al.	
	AD	2003/0101336	05-29-2003	Kosche et al.	
 	AE .	2003/0105942	06-05-2003	Damron et al.	
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		NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.1	Include name of author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²		
	AA	ALPERN, B. et al., "The Jalapeno Virtual Machine," IBM Systems Journal, Vol. 39, No. 1, 2000, pages 211-238.			
	AB	ANDERSON, Jennifer et al., "Continuous Profiling (It's 10:43; Do You Know Where Your Cycles Are?)," abstract for presentation at HOT Chips 9, Stanford, CA, August 1997, 2 pages, retrieved from the Internet at URL http://h30097.www3.hp.com/dcpi/publications.htm.			
	AC	ANDERSON, Jennifer et al., "Instruction-Level Profiling on In-Order and Out-of-Order Processors," DEC presentation by Jeff Dean at Duke University, December 3, 1997, 42 pages, retrieved from the Internet at URL http://h30097.www3.hp.com/dcpi/publications.htm.			
	AD	ANDERSON, Jennifer et al., "Continuous Profiling: An Electron Microscope for Your Computer," presentation by Mark Vandevoorde to Silicon Valley summer interns, Palo Alto, CA, August 13, 1999, 18 pages.			
	AE	ARMSTRONG, Eric, "HotSpot: A new breed of virtual machine," Java World, March 1998, 11 pages, retrieved from the Internet at URL http://www.javaworld.com.			
	AF	BERRENDORF, Rudolf and ZIEGLER, Heinz, "PCL - The Performance Counter Library: A Common Interface to Access Hardware Performance Counters on Microprocessors (Version 1.2)," Technical Report FZJ-ZAM-IB-9816, Julich, Germany, October 1998, pages 1-50.			
	AG BERC, Lance and VANDEVOORDE, Mark, "Hardware Support for Out-of-Order Instruction Profiling on Alpha 21264a," <i>HotChips 11</i> , (Power Point) Stanford, CA, USA, August 17, 1999, 21 pages.				
	AH	BROWNE, Shirley et al., "A Scalable Cross-Platform Infrastructure for Application Performance Tuning Using Hardware Counters," <i>Proceedings of SC2000</i> , Dallas, TX, November 2000, 10 pages.			
	ΑI	BURROWS, Mike et al., "Efficient and Flexible Value Sampling," Architectural Support for Programming Languages and Operating Systems (ASPLOS-IX), Nov. 13 2000, pages 1-19.			
	AJ	CHILIMBI, Trishul M. et al., "Cache-Conscious Structure Layout," Proceedings of the ACM SIGPLAN '99 Conf. on Programming Language Design and Implementation, May 1999, 12 pages.			
	AK	CHILIMBI, Trishul J., et al., "Cache-Conscious Structure Definition," <i>Proceedings of the ACM SIGPLAN '99 Conf. on Programming Language Design and Implementation</i> , May 1999, 12 pages.			
	AL	DEROSE, Luiz et al., "SIGMA: A Simulator Infrastructure to Guide Memory Analysis," Conf. on High Performance Networking and Computing Proceedings of the 2002 ACM/IEEE Conf. on Supercomputing, Baltimore, MD, 2002, 13 pages.			
	AM ITZKOWITZ, Marty et al., "Memory Profiling Using Hardware Counters," in Conf. on High Performance Networking and Computing Proceedings of the 2003 ACM/IEEE Conf. on Supercomputing, Phoenix, AZ, November 15-21, 2003, pages 1-12.				
	AN	LEBECK, Alvin R., "Cache Conscious Programming in Undergraduate Computer Science," ACM SIGCSE Technical Symposium on Computer Science Education (SIGCSE '99), Proceedings of the 30th SIGSCE Tech Symposium on Comp. Sci. Edu., New Orleans, LA, USA, March 24-28, 1999, 5 pages.			
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	AA	LIPASTI, Mikko H. et al., "SPAID: Software Prefetching in Pointer- and Call-Intensive Environments," <i>Micro 28 Proceedings of the 28th Annual International Symposium on Microarchitecture,</i> Nov. 29-Dec. 1, 1995, Ann Arbor, MI, 6 pages.	
	AB	LUK, Chi-Keung and MOWRY, Todd, "Compiler-Based Prefetching for Recursive Data Structures," APLOS-VII, Proceedings of the Seventh International Conf. on Architectural Support for Programming Languages and Operating Systems, Cambridge, MA, Oct. 1-5, 1996, 12 pages.	
	AC	MARTONOSI, Margaret et al., "MemSpy: Analyzing Memory System Bottlenecks in Programs," <i>Proceedings of the1992 ACM SIGMETRICS Joint Int'l. Conf. on Measurement and Modeling of Computer Systems</i> , Newport, RI, USA, June 1-5, 1992, pages 1-12.	
	AD	MOWRY, Todd C. et al., "Design and Evaluation of a Compiler Algorithm for Prefetching," ASPLOS-V, Proceedings of the Fifth International Conf. on Architectural Support for Programming Languages and Operating Systems, Boston, MA, USA, Oct. 12-15, 1992, pages 62-73.	
	AE	RUBIN, Shai et al., "An Efficient Profile-Analysis Framework for Data-Layout Optimizations," <i>Proceedings of the 29th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages</i> , Portland, OR USA, Jan. 16-18, 2002, 14 pages.	
	AF	SPRUNT, Brinkley, "The Performance Monitoring Features of the Pentium 4 Processor," <i>IEEE Micro</i> , Vol. 22, No. 4, July 2002, pages 32-42.	
	AG	SRIDHARAN, K., "VTune: Intel's Visual Tuning Environment," <i>Proceedings of USENIX-NT Windows NT Workshop</i> , August 11, 1997, Seattle, CA, USA, retrieved from the Internet at URL http://www.usenix.org/publications/library/proceedings/usenix-nt97/presentations/sridhar.html, 24 pages.	
	АН	"Program Performance Analysis Tools," Sun Microsystems, Inc. Publication 817-0922-10, May 2003, retrieved from the Internet at URL http://docs.sun.com/source/817-0922/, 244 pages.	-
	AI	VENNERS, Bill, "The HotSpot Virtual Machine, How HotSpot Can Improve Java Program Performance and Designs," <i>Artima Developer</i> , May 1998, 7 pages, retrieved from the Internet at URL http://www.artima.com.	
	AJ	WALKER, Kip et al., "Using Interpretation for Profiling the Alpha 21264a," (Power Point) presented at Carnegie Mellon University, October 1999, 29 pages.	
	AK	WEIHL, William E., "Digital Continuous Profiling Infrastructure," June 2004, 3 pages, retrieved from the Internet at URL http://www.research.digital.com/SRC/dcpi.html.	
	AL	"The Java HotSpot Performance Engine Architecture," Digital Forefront Magazine, Winter 1997, pages 27-28, retrieved from the Internet at URL http://java.sun.com/products/whitepaper.html.	
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Examiner Sig	nature	Date Considered	